

Claims

What is claimed is:

1. A gas supply and monitoring system comprising:
  - a. a variable size orifice system connected to a gas source wherein said variable size orifice system has a gas outflow opposite of said gas source; and
  - b. a sensor system connected to said gas outflow wherein said sensor system can be used to verify a patient receives the appropriate gas from said gas source.
2. The gas supply and monitoring system of claim 1 wherein said gas source comprises of a gas containment dispenser.
3. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser is an in-house gas supply.
4. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser is a portable gas supply.
5. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser comprises of oxygen.
6. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser comprises of nitrous oxide.
7. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser comprises of a sedative.

8. The gas supply and monitoring system of claim 2 wherein said gas containment dispenser comprises of an analgesic.
9. The gas supply and monitoring system of claim 1 wherein said variable size orifice system further comprises of a pressure relief valve and a control unit connected to a variable size orifice valve.
10. The gas supply and monitoring system of claim 9 wherein said variable size orifice system further comprises of a high side pressure sensor connected between said pressure relief valve and said variable size orifice valve and a low side pressure sensor connected to said gas outflow.
11. The gas supply and monitoring system of claim 1 wherein said variable size orifice system further comprises of and n-way valve connected to n discrete orifices wherein n is the number of pressure levels produced from said variable size orifice system.
12. The gas supply and monitoring system 1 wherein said sensor system further comprises gas sensor.
13. The gas supply and monitoring system 12 wherein said gas sensor is a galvanic cell.
14. A gas supply and monitoring system comprising:
  - a. a variable size orifice system connected to a gas source wherein said variable size orifice system has a gas outflow opposite of said gas source;

- b. a sensor system connected to said gas outflow wherein said sensor system can be used to verify a patient receives the appropriate gas from said gas source; and
  - c. a control unit connected to said variable size orifice system and said sensor system wherein said control unit can be used to control the gas flow through said variable size orifice system and to control delivery of a sample of said gas outflow to said sensor system.
15. The gas supply and monitoring system of claim 14 wherein said gas source comprises of a gas containment dispenser.
16. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser is an in-house gas supply.
17. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser is a portable gas supply.
18. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser comprises of oxygen.
19. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser comprises of nitrous oxide.
20. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser comprises of a sedative.
21. The gas supply and monitoring system of claim 15 wherein said gas containment dispenser comprises of an analgesic.

22. The gas supply and monitoring system of claim 14 wherein said variable size orifice system further comprises of a pressure relief valve and a control unit connected to a variable size orifice valve.
23. The gas supply and monitoring system of claim 22 wherein said variable size orifice system further comprises of a high side pressure sensor connected between said pressure relief valve and said variable size orifice valve and a low side pressure sensor connected to said gas outflow.
24. The gas supply and monitoring system of claim 14 wherein said variable size orifice system further comprises of and n-way valve connected to n discrete orifices wherein n is the number of pressure levels produced from said variable size orifice system.
25. The gas supply and monitoring system of claim 14 wherein said sensor system further comprises gas sensor.
26. The gas supply and monitoring system of claim 25 wherein said gas sensor is a galvanic cell.
27. A method of delivering and monitoring a gas supply and monitoring system which comprises:
- a. calibrating the gas supply and monitoring system;
  - b. verifying functionality of the sensors;
  - c. measuring gas concentration;
  - d. verifying the appropriate gas output and concentration level; and
  - e. delivering gas to the patient.

28. A method of delivering and monitoring a gas supply and monitoring system recited in claim 27 wherein checking said verifying functionality of the sensors further includes sounding an alarm if said sensors are not working.
29. A method of delivering and monitoring a gas supply and monitoring system recited in claim 27 wherein measuring gas concentration further includes sounding an alarm if said gas concentration is outside an acceptable range.
30. A method of delivering and monitoring a gas supply and monitoring system recited in claim 27 wherein monitoring gas concentration further includes sounding an alarm if said gas concentration is outside an acceptable range.